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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/628,470	07/31/2000	Peter G. Webb	10004003-1	5545

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EXAMINER

QUAN, ELIZABETH S

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 04/24/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/628,470

Applicant(s)

WEBB, PETER G.

Examiner

Elizabeth Quan

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2 and 4-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-33 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 05 February 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Oath/Declaration***

1. It does not identify the citizenship of each inventor. It is unclear what AU is meant for citizenship.

### ***Drawings***

2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 2/5/2003 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

### ***Specification***

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

4. Claim 17 is objected to because of the following informalities: It is recommended that "that column" be changed to "the column" to conform to the standard claim language in referring to an element previously recited. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

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6. Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Referring to claims 1, 14, 27, the limitation “**each group** comprises a series of drop dispensers within **the group** loaded with a same fluid” is rendered indefinite. “Each group” is implying more than one group, and “the group” is either suggesting that “Each group” is only one group. Does “the group” refer to the entirety of multiple groups or a group within the multiple groups? Potentially, there is a lack of antecedent basis for “the group” since the claim has not adequately designated the “multiple groups” or “each group” such that “the group” may refer to either. Therefore, it is unclear whether that all dispensers in each group is loaded with the same fluid but the dispensers of each group may not necessarily be loaded with the same fluid or all of the dispensers in the multiple groups of dispenser is loaded with the same fluid.

8. Referring to claims 9, 12, 21, 24, the limitation “**each column of each group** of dispensers of a **same column within a group** are loaded with a same fluid” is rendered indefinite. What is the relationship of “each column of each group” and “same column within a group”? Does “a same column within a group” refer to previously recited “each column of each group”? If that is the case, there is a lack of antecedent basis. Are all the columns of a group loaded with the same fluid? Is one column of each group loaded with the same fluid? Is one column of a group loaded with the same fluid?

9. Claim 12 recites the limitations “that column” in the 5<sup>th</sup> line and “a same column in a group” in the 6<sup>th</sup> and 7<sup>th</sup> lines. There is insufficient antecedent basis for this limitation in the claim. Which column? It is noted that the columns has been referred to in groups. Since the

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columns have not been individually referred to, one cannot refer to "that column." The error has been consistent through the application, for instance, the use of "the group" when only multiple groups have been provided with antecedent basis.

10. Claim 24 recites the limitation "the column" in the 4<sup>th</sup> line and "a same column in a group" in the 5<sup>th</sup> and 6<sup>th</sup> lines. There is insufficient antecedent basis for this limitation in the claim. Which column? It is noted that the columns has been referred to in groups. Since the columns have not been individually referred to, one cannot refer to "that column." The error has been consistent through the application, for instance, the use of "the group" when only multiple groups have been provided with antecedent basis.

11. Referring to claims 30-33, it is unknown what is meant by features. It is also unknown how an array carries polynucleotide containing features. It is unknown what is meant by an array carries features with polynucleotide of different sequence. In the latter, what is the sequence of polynucleotide contrasted with such that it is of different sequence. It is unknown what is meant by peptide containing features. What are features?

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 1, 2, 4, 6-9, 11-14, 16-21, and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,581,284 to Hermanson in view of U.S. Patent No. 4,963,882 to Hickman.

Referring to claims 1, 2, 4, 6-9, 11-14, 16-21, and 23-29, Hermanson discloses a method, apparatus, and computer program for fabricating a chemical array (see ABSTRACT). A head system (14,15,16,17) has multiple groups of drop dispensers (23) with each group having multiple dispensers (see ABSTRACT; FIGS. 1-7; COL. 2, lines 52-55). The series of dispensers in each printbar is loaded with the same fluid (see COL. 4, lines 9-16). The series of dispensers within a group of multiple columns communicates with a corresponding common reservoir (29) for that series (see FIG. 2; COL. 3, lines 22-27). A processor drives the dispensers (23) to eject droplets (see COL. 3, lines 9-21). In order to extend the useful life of the head system (14,15,16,17), each dispenser is checked for droplet ejection to identify any dispenser that fails to eject a droplet as a problem dispenser (see COL. 2, lines 15-20; COL. 5, lines 7-17). A sensor may be used to monitor dispensers for an error and provide corresponding data to the processor (see COL. 5, lines 34-67; COL. 6, lines 1-43). When a dispenser of a first group is in error, a second dispenser of each of the other groups is aligned with the completed pattern of the selected path for its group (see COL. 2, lines 20-28; COL. 4, lines 50-67; COL. 5, lines 1-6). The recording medium is positioned with a first row of

each of the other groups of the head system such that it is aligned with the selected path for that group (see COL. 4, lines 44-67; COL. 5, lines 1-16). The substrate is moved while dispensing droplets from non-error dispensers in the first row of the first group in accordance with a part of the pattern for the selected path for that group (see COL. 4, lines 44-67; COL. 5, lines 1-16). The substrate is re-positioned such that a second row of each group of the head system is aligned with the selected paths (see COL. 4, lines 44-67; COL. 5, lines 1-16). The substrate is moved while dispensing droplets from non-error dispensers in the second row of the first group in accordance with a part of the pattern for that group (see COL. 4, lines 44-67; COL. 5, lines 1-16).

Hermanson does not disclose a transport system to move the head system and dispensing droplets from at least the second dispenser of the first group. However, it is well known in the art as Hickman discloses a transport system to move the head system (see COL. 3, lines 13-25; COL. 7, lines 18-21 and 37-47; COL. 9, lines 25-51). It appears there is more control to dispense in a certain location with a moving head system rather than a moving recording medium. Hickman discloses the print head with two groups of nozzles (54,56) with multiple rows and columns of dispensers (see FIG. 2). While dispensers of different column within first and second rows of a first group may be in error, the head is positioned with a first row of each group aligned with the selected path for that group (see COL. 9, lines 25-68; COL. 10, lines 1-10). The head is moved with respect to the substrate while dispensing droplets from non-error dispensers in the first row of the first group in accordance with a part of the pattern from the selected path for that group (see COL. 9, lines 25-68; COL. 10, lines 1-10). The head is re-positioned

such that a second row of each group is aligned with the selected paths (see COL. 9, lines 25-68; COL. 10, lines 1-10). The head is moved with respect to the substrate while dispensing droplets from non-error dispensers in the second row of the each group in accordance with a part of the pattern for that group (see COL. 9, lines 25-68; COL. 10, lines 1-10). In another perspective, Hickman further discloses at least the second dispenser of the print head as a single group of nozzles dispenses droplets in the partial or complete pattern for the selected path of the first group to ensure all desired locations of an array are filled even if a dispenser has malfunctioned (see COL. 3, lines 36-39, 45-48, 54-59, and 63-68; COL. 4, lines 1-8, 20-23, 50-54, and 64-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method, apparatus, and computer program of Hermanson to include the transport system to move the head system as in Hickman for more control over dispensing into a certain location and dispensing droplets from at least the second dispenser of the first group or print head in the partial or complete pattern for the selected path of the first group as in Hickman to ensure all desired locations of an array are filled in the case of a malfunctioned dispenser.

15. Alternatively, claims 1, 2, 4, 6-9, 11-14, 16-21, and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,581,284 to Hermanson in view of U.S. Patent No. 4,963,882 to Hickman and U.S. Patent No. 4,907,013 to Hubbard et al.

Referring to claims 1, 2, 4, 6-9, 11-14, 16-21, and 23-29, Hermanson discloses a method, apparatus, and computer program for fabricating a chemical array (see ABSTRACT). A head system (14,15,16,17) has multiple groups of drop dispensers (23)



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with each group having multiple dispensers (see ABSTRACT; FIGS. 1-7; COL. 2, lines 52-55). The series of dispensers in each printbar is loaded with the same fluid (see COL. 4, lines 9-16). The series of dispensers within a group of multiple columns communicates with a corresponding common reservoir (29) for that series (see FIG. 2; COL. 3, lines 22-27). A processor drives the dispensers (23) to eject droplets (see COL. 3, lines 9-21). In order to extend the useful life of the head system (14,15,16,17), each dispenser is checked for droplet ejection to identify any dispenser that fails to eject a droplet as a problem dispenser (see COL. 2, lines 15-20; COL. 5, lines 7-17). A sensor may be used to monitor dispensers for an error and provide corresponding data to the processor (see COL. 5, lines 34-67; COL. 6, lines 1-43). When a dispenser of a first group is in error, a second dispenser of each of the other groups is aligned with the completed pattern of the selected path for its group (see COL. 2, lines 20-28; COL. 4, lines 50-67; COL. 5, lines 1-6). The recording medium is positioned with a first row of each of the other groups of the head system such that it is aligned with the selected path for that group (see COL. 4, lines 44-67; COL. 5, lines 1-16). The substrate is moved while dispensing droplets from non-error dispensers in the first row of the first group in accordance with a part of the pattern for the selected path for that group (see COL. 4, lines 44-67; COL. 5, lines 1-16). The substrate is re-positioned such that a second row of each group of the head system is aligned with the selected paths (see COL. 4, lines 44-67; COL. 5, lines 1-16). The substrate is moved while dispensing droplets from non-error dispensers in the second row of the first group in accordance with a part of the pattern for that group (see COL. 4, lines 44-67; COL. 5, lines 1-16).

Hermanson does not disclose a transport system to move the head system and dispensing droplets from at least the second dispenser of the first group. However, it is well known in the art as Hickman discloses a transport system to move the head system (see COL. 3, lines 13-25; COL. 7, lines 18-21 and 37-47; COL. 9, lines 25-51). It appears there is more control to dispense in a certain location with a moving head system rather than a moving recording medium. Hickman discloses the print head with two groups of nozzles (54,56) with multiple rows and columns of dispensers (see FIG. 2). While dispensers of different column within first and second rows of a first group may be in error, the head is positioned with a first row of each group aligned with the selected path for that group (see COL. 9, lines 25-68; COL. 10, lines 1-10). The head is moved with respect to the substrate while dispensing droplets from non-error dispensers in the first row of the first group in accordance with a part of the pattern from the selected path for that group (see COL. 9, lines 25-68; COL. 10, lines 1-10). The head is re-positioned such that a second row of each group is aligned with the selected paths (see COL. 9, lines 25-68; COL. 10, lines 1-10). The head is moved with respect to the substrate while dispensing droplets from non-error dispensers in the second row of the each group in accordance with a part of the pattern for that group (see COL. 9, lines 25-68; COL. 10, lines 1-10). In another perspective, Hickman further discloses at least the second dispenser of the print head as a single group of nozzles dispenses droplets in the partial or complete pattern for the selected path of the first group to ensure all desired locations of an array are filled even if a dispenser has malfunctioned (see COL. 3, lines 36-39, 45-48, 54-59, and 63-68; COL. 4, lines 1-8, 20-23, 50-54, and 64-67). Alternatively, Hubbard

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discloses dispensing droplets from at least the second dispenser of the first group in at least part of the pattern for the selected path of the first group to compensate for malfunctioned dispensers (see COL. 9, lines 3-9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method, apparatus, and computer program of Hermanson to include the transport system to move the head system as in Hickman for more control over dispensing into a certain location and dispensing droplets from at least the second dispenser of the first group or print head in the partial or complete pattern for the selected path of the first group as in Hickman or Hubbard to ensure all desired locations of an array are filled in the case of a malfunctioned dispenser.

16. Claims 5, 10, 15, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,581,284 to Hermanson in view of U.S. Patent No. 4,963,882 to Hickman and U.S. Patent No. 6,001,309 to Gamble et al.

Referring to claims 5, 10, 15, and 22, Hermanson in view of Hickman do not disclose dispensers as pulse jets. However, Gamble et al. disclose pulse jet dispensers to deliver small volumes of solutions in a precise manner to provide a micro-sized spot (see COL. 1, lines 52-67; COL. 2, lines 1-17 and 44-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Hermanson in view of Hickman to include a pulse jet dispenser to deliver small volumes of solutions in a precise manner to provide micro-sized droplets.

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17. Claims 5, 10, 15, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,581,284 to Hermanson in view of U.S. Patent No. 4,963,882 to Hickman, U.S. Patent No. 4,907,013 to Hubbard et al., and U.S. Patent No. 6,001,309 to Gamble et al.

Referring to claims 5, 10, 15, and 22, Hermanson in view of Hickman and Hubbard et al. do not disclose dispensers as pulse jets. However, Gamble et al. disclose pulse jet dispensers to deliver small volumes of solutions in a precise manner to provide a micro-sized spot (see COL. 1, lines 52-67; COL. 2, lines 1-17 and 44-67). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Hermanson in view of Hickman and Hubbard et al. to include a pulse jet dispenser to deliver small volumes of solutions in a precise manner to provide micro-sized droplets.

18. Claims 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,581,284 to Hermanson in view of U.S. Patent No. 4,963,882 to Hickman and/or U.S. Patent No. 4,907,013 to Hubbard et al., and further in view of U.S. Patent No. 6,284,113 to Bjornson et al. and U.S. Patent No. 6,057,100 to Heyneker or U.S. Patent No. U.S. Patent No. 6,251,601 to Bao et al.

Referring to claims 30-33, Hermanson in view of Hickman and/or Hubbard et al. do not disclose the array comprising biopolymer, polynucleotide, or peptide components. Hermanson, Hickman, and Hubbard et al. all deal with ink jet technology. However, it is well known that ink jet technology has been adapted in the field of microfluidic devices or chemical laboratory devices in preparing arrays. Bjornson et al. disclose that developments in the microfluidic technologies have been borrowed from the ink jet

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printing industry, which are applicable to fulfilling at least part of the currently unmet technological needs (see COL. 3, lines 66 and 67; COL. 4, lines 1-3). The technology assists in creating combinatorial chemistry generated libraries of compounds, usually small molecules, oligonucleotides and peptides (see COL. 27, lines 8-10). Heynaker discloses that oligonucleotides may be applied to a surface in a number of ways (see COL. 7, lines 59 and 60). In a preferred embodiment, the oligonucleotides are applied using ink jet technology (see COL. 7, lines 62-64). Bao et al. disclose separated spots can be produced by ink jet methods (see COL. 9, lines 29-32). Spots may comprise of RNA, DNA, peptide nucleic acids or mixtures thereof (see COL. 7, lines 33-42; CLAIMS 18 and 28). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Hermanson in view of Hickman and/or Hubbard et al. to construct arrays of polynucleotides or peptides in as in Bjornson et al. and Heyneker or Bao et al. since ink jet technology has been widely adapted in the field of microfluidic or chemical laboratory devices to fulfill deficiencies of microfluidic or chemical laboratory devices.

### ***Response to Arguments***

1. Applicant's arguments, see page 9 under "Paragraph 7," filed 2/5/2003, with respect to claims 1, 9, 14, 16-21, 26, and 27 have been fully considered and are persuasive. The rejection of claims 1, 9, 14, 16-21, 26, and 27 regarding the clarity of the term "error" has been withdrawn.
2. Regarding Applicant's response to 112 second paragraph rejection of claims 1, 2, 6-9, 11, 13, 14, 16, 18-21, 23, and 27-29, on page 9 under "Paragraph 8," it is noted that the terms "first"

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and “second” are relative. They do not necessarily represent the sequence of elements. For example, in claim 1 the recitation of “when a dispenser of the series within a first group is in error, then moving a second dispenser of the series of each group along the selected path for its group while dispensing droplets from at least the second dispenser of the series of the first group in at least part of the pattern for the selected path of the first group.” The “second” dispenser can be reasonably broadly interpreted as the dispenser other than the dispenser labeled as the “first” dispenser. In other words, the terms “first” and “second” are labels.

3. The rejection of claims 1, 14, and 27 regarding the definiteness of “while dispensing droplets from at least the second dispenser of the series of the first group” has been withdrawn due to Applicant’s amendment.

4. The rejection of claims 1, 2, 8, 14, 16, and 27 regarding the clarity of “selected path” and “respective path” has been withdrawn due to Applicant’s amendment.

5. The rejection of claims 2, 6, 13, 16, and 28 regarding the clarity and antecedent basis of “same group” has been withdrawn due to Applicant’s amendment.

6. The rejection of claims 3, 4, and 17 regarding the antecedent basis and clarity of “same series” has been withdrawn due to Applicant’s amendment.

7. Applicant’s arguments, see page 13 under “Paragraph 17,” filed 2/5/2003, with respect to claims 8, 20, and 29 have been fully considered and are persuasive. The rejection of claims 8, 20, and 29 regarding the clarity of “the first and second dispensers of each group are moved alternately” has been withdrawn.

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8. Applicant's arguments, see page 13 under "Paragraph 18," filed 2/5/2003, with respect to claims 9, 11-13, 21, and 23-25 have been fully considered and are persuasive. The rejection of claims 9, 11-13, 21, and 23-25 has been withdrawn.

9. The rejection of claims 11 and 23 regarding the clarity of "that group" has been withdrawn due to Applicant's amendment.

10. Applicant's arguments filed 2/5/2003 have been fully considered but they are not persuasive. Attorney argues that claim 1 has been amended to recite that "each group comprises a series of drop dispensers within the group loaded with a same fluid." Attorney further argues that since the dispensers of a group are loaded with the same fluid it necessarily follows that any drop dispensing by an error dispenser is replaced with that of a dispenser dispensing the same fluid since it is replaced by a dispenser of the same series. Attorney argues that this is unlike Hermanson where the one color is necessarily replaced by another color, and none of the other cited references make up for this deficiency in Hermanson nor has the Examiner alleged they do.

11. Examiner has made 112, second paragraph rejection regarding the clarity of the limitation "each group comprises a series of drop dispenser within the group loaded with a same fluid." It is noted that the limitation does not recite that all of the drop dispensers are loaded with the same fluid. Rather, it appears that the limitation is reciting that a series of drop dispensers with a group is loaded with the same fluid. It follows that the remaining series of drop dispensers are not necessarily filled with the same fluid. With the recitation of "when a dispenser of the series within a first group is in error, then moving a second dispenser of the series of each group along the selected path for its group while dispensing droplets from at least the second dispenser of the series of the first group in at least part of the pattern for the selected path of the first group" the

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second dispenser may not necessarily dispense the same fluid since the second dispensers are each from different series and the same fluid is loaded within the dispenser of a series. In other words, all of the dispensers of a series are filled with the same fluid but not all of the series with their grouping of dispensers is filled with the same fluid. Therefore, each series of dispensers may contain a different fluid. Furthermore, the limitation does not recite that drop dispensing by an error dispenser is replaced with that of a dispenser dispensing the same fluid. The claim recites “moving a second dispenser of the series of each group along the selected path for its group while dispensing droplets from at least the second dispenser of the series of the first group in at least part of the pattern for the selected path of the first group.” The second dispenser may continue moving along the selected path as the first dispenser finishes depositing the array or line of compositions since the claim only recites that “the second dispenser moves along the selected path for its group” and “dispensing droplets from at least the second dispenser of the series of the first group in at least part of the pattern for the selected path of the first group.” Note that the path or pattern is referred to the path or pattern of the group not the series of dispensers or individual dispensers. The language of the claims is extremely confusing. It is noted that the terms “series” or “group” may be arbitrarily assigned to any subset of elements in broadly speaking terms. It is also noted that “rows” and “columns” are relative terms.

12. It is not clear what is meant by “it is not sufficient in chemical array fabrication to replace a feature which was to carry a particular chemical probe with some other chemical probe,” as presented in the arguments. The arguments and inventions have been directed to replacing an error dispenser by a non-error dispenser although the claim does not recite it.



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13. It is noted that newly added limitations and amendments must be accompanied by directing to the support of the newly added limitations and amendments in the specification.

***Conclusion***

19. It is noted that the preamble of each of the independent claims recites a method for fabricating arrays. However, the method steps in the claims are directed to a method of correction. Either the preamble should recite a method of correction or method steps directly involved in fabricating arrays should be included.


20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art includes one or more limitations in the claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Quan whose telephone number is (703) 305-1947. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (703) 308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 879-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Elizabeth Quan  
Examiner  
Art Unit 1743

  
Jill Warden  
Supervisory Patent Examiner  
Technology Center 1700

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